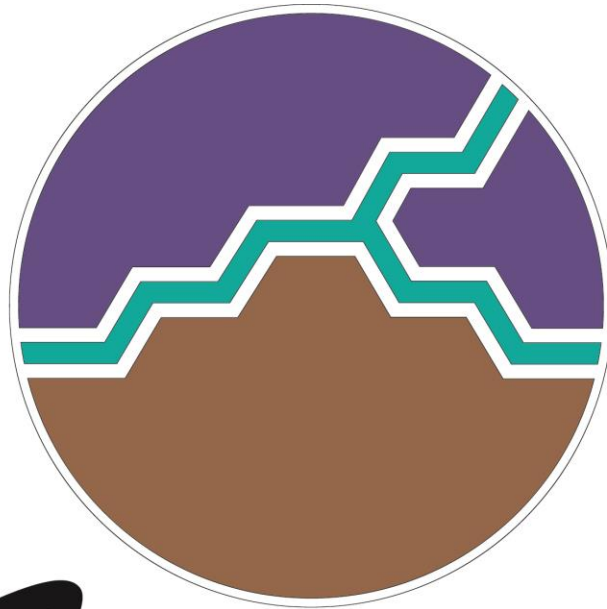


2015

City of Yuma

**SUPPLEMENT TO
MAG UNIFORM STANDARD
SPECIFICATIONS
For
PUBLIC WORKS CONSTRUCTION**



CITY OF
Yuma

EFFECTIVE XXXX XX, 2016



2015 CITY OF YUMA SUPPLEMENT TO THE 2015 MAG UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

The City of Yuma Supplement to the 2015 Maricopa Association of Governments (MAG) Uniform Standard Specifications for Public Works Construction replaces the existing City of Yuma Standard Construction Specifications. The City of Yuma Supplement to MAG Uniform Standard Specifications shall be considered a Supplement to MAG Uniform Standard Specifications as published by the Maricopa Association of Governments.

The Specifications should be thoroughly reviewed by the professional engineers and architects in responsible charge prior to incorporating them into project plans and specifications. The Specifications are not a substitute for good engineering judgment. Unique conditions will arise that are outside of the scope of this document. Professional engineers and architects are required to use their judgment to develop special provisions to properly adjust the Specifications to best meet site-specific needs. Professional engineers and architects are required to provide professional services in accordance with the statutes of the State of Arizona and the rules of the Arizona State Board of Technical Registration. Not all specifications contained herein will apply to all projects.

All public works construction contracts advertised and all permits issued shall be governed by the **2015 edition**.

A copy of the **2015 edition** is available for review and download on the City of Yuma Website at the following address:

<http://www.yumaaz.gov/city-engineering/engineering-documents--references-.html>

CONSTRUCTION SPECIFICATIONS

TABLE OF CONTENTS

PARTS [100](#),[200](#),[300](#),[400](#),[500](#),[600](#)&[700](#)

PART 100 – [GENERAL CONDITIONS](#)

Section Title	COY
101 Abbreviations and Definitions	101-1
102 Bidding Requirements and Conditions	102-1
103 Award and Execution of Contract	103-1
104 Scope of Work	104-1
105 Control of Work	105-1
106 Control of Materials	N/A
107 Legal Regulations and Responsibility to Public	107-1
108 Commencement, Prosecution and Progress	108-1
109 Measurements and Payments	109-1
110 Notification of Changed Conditions and Dispute Resolution	110-1
111 Health & Safety	111-1

PART 200 – EARTHWORK

PART 300 - [STREETS AND RELATED WORK](#)

Section Title	COY
301 Subgrade Preparation	301-1
306 Mechanically Stabilized Subgrade-Geogrid Reinforcement	N/A
309 Lime Slurry Stabilization or Modification of Subgrade	N/A
310 Placement and Construction of Aggregate Base Course	310-1
311 Placement and Construction of Cement Treated Subgrade	N/A
312 Cement Treated Base	N/A
315 Bituminous Prime Coat	N/A
317 Asphalt Milling	N/A
320 Road-mixed Surfacing	N/A
321 Placement and Construction of Asphalt Concrete Pavement	321-1
324 Portland Cement Concrete Pavement (PCCP)	N/A
325 Placement and Construction of Asphalt-Rubber Asphalt Concrete	N/A
327 Hot In-Place Recycling	N/A
329 Tack Coat	329-1
330 Asphalt Chip Seal	N/A
331 Microsurfacing Specifications	N/A
332 Placement and Construction of Asphalt Emulsion Slurry Seal Coat	N/A
333 Fog Seal Coats	N/A
334 Preservative Seal for Asphalt Concrete	N/A
335 Placement and Construction of Hot Asphalt-Rubber Seal	N/A
336 Pavement Matching and Surfacing Replacement	336-1
337 Crack Sealing	N/A
340 Concrete Curb, Gutter, Sidewalk, Curb Ramps, Driveway and Alley Entrance	340-1

342	Decorative Pavement Concrete Paving Stone	N/A
343	Exposed Aggregate Paving	N/A
345	Adjusting Frames, Covers, Valve Boxes Meter Boxes and Pull Boxes	345-1
350	Removal of Existing Improvements	350-1
355	Utility Potholes-Keyhole Method	N/A
360	Telecommunications Installation	N/A

PART 400 – [RIGHT-OF-WAY AND TRAFFIC CONTROL](#)

Section Title	COY
401 Traffic Control	401-1
405 Survey Monuments	405-1
410 Precast Safety Curbs	N/A
415 Flexible Metal Guardrail	N/A
420 Chain Link Fences	N/A
424 Parkway Grading	N/A
425 Topsoils	N/A
430 Landscaping and Planting	N/A
440 Sprinkler Irrigation System Installation	N/A

PART 500 – [STRUCTURES](#)

Section Title	COY
505 Concrete Structures	N/A
506 Precast Prestressed Concrete Members	506-1
510 Concrete Block Masonry	N/A
511 Brick Masonry	N/A
515 Steel Structures	N/A
520 Steel and Aluminum Handrails	N/A
525 Pneumatically Placed Mortar	N/A
530 Painting	N/A

PART 600 – [WATER, SEWER, STORM DRAIN AND IRRIGATION](#)

Section Title	COY
601 Trench Excavation, Backfilling and Compaction	601-1
602 Trenchless Installation of Steel Casing	N/A
604 Placement of Controlled Low Strength Material	604-1
605 Subdrainage	N/A
607 Trenchless Installation of Smooth Wall Jacking Pipe	N/A
610 Water Line Construction	610-1
611 Water, Sewer and Storm Drain Testing	611-1
615 Sanitary Sewer Line Construction	N/A
616 Reclaimed Water Line Construction	N/A
618 Storm Drain Construction	618-1
620 Cast-in-place Concrete Pipe	N/A
621 Corrugated Metal Pipe and Arches	N/A
625 Manhole Construction and Drop Sewer Connections	625-1
630 Tapping Sleeves, Valves and Valve Boxes on Water Lines	630-1
631 Water Taps and Meter Service Connections	631-1

PART 700 – MATERIALS

Section Title		COY
701	Aggregate	N/A
702	Base Materials	N/A
703	Riprap	N/A
705	Portland Cement Treated Base	N/A
708	Asphalt Pavement Core Bonding Materials	N/A
710	<u>Asphalt Concrete</u>	710-1
711	Paving Asphalt	N/A
712	Liquid Asphalt	N/A
713	Emulsified Asphalts Materials	N/A
714	Microsurfacing Materials	N/A
715	<u>Slurry Seal Materials</u>	715-1
716	Cover Material	N/A
717	Asphalt-Rubber Asphalt Concrete	N/A
718	Preservative Seal for Asphalt Concrete	N/A
725	<u>Portland Cement Concrete</u>	725-1
726	Concrete Curing Materials	N/A
727	Steel Reinforcement	N/A
728	Controlled Low Strength Material	N/A
729	Expansion Joint Filler	N/A
735	Reinforced Concrete Pipe	N/A
736	Non-reinforced Concrete Pipe	N/A
738	<u>High Density Polyethylene Pipe and Fittings for Storm Drain and Sanitary Sewer</u>	738-1
739	Steel Reinforced Polyethylene Pipe & Fittings for Storm Drain, Irrigation & Sanitary Sewer	N/A
740	Polypropylene Pipe & Fittings for Storm Drain, Irrigation & Sanitary Sewer	N/A
741	<u>Lining for Reinforced Concrete Sanitary Sewer Pipe</u>	741-1
742	Precast Manhole	N/A
743	<u>Vitrified Clay Pipe</u>	743-1
744	ABS Truss Pipe and Fittings	N/A
745	PVC Sewer Pipe and Fittings	N/A
750	<u>Iron Water Pipe and Fittings</u>	750-1
752	<u>Asbestos-Cement Water Pipe and Fittings</u>	752-1
753	<u>Galvanized Pipe and Fittings</u>	753-1
754	<u>Copper Pipe, Tubing and Fittings</u>	754-1
755	Polyethylene Pipe for Water Distribution	N/A
756	Dry Barrel/Fire Hydrants	N/A
757	Sprinkler Irrigation System	N/A
758	Concrete Pressure Pipe - Steel Cylinder Type	N/A
759	Steel Pipe	N/A
760	Coating Corrugated Metal Pipe and Arches	N/A
761	Structural Plate Pipe, Arches, and Pipe Arches	N/A
770	Structural and Rivet Steel, Rivets, Bolts, Pins, and Anchor Bolts	N/A
771	Galvanizing	N/A
772	Chain Link Fence	N/A
775	Brick and Concrete Masonry Units (Blocks)	N/A
776	Masonry Mortar and Grout	N/A

778	Lumber	N/A
779	Wood Preservatives	N/A
787	Gray Iron Castings	N/A
790	Paint	N/A
792	Dust Palliative	N/A
795	Landscape Material	N/A
796	Geosynthetics	N/A

N/A – No change to MAG Specifications

CONSTRUCTION SPECIFICATIONS

PART 100 - GENERAL CONDITIONS

Section Title	COY
101 <u>Abbreviations and Definitions</u>	101-1
102 <u>Bidding Requirements and Conditions</u>	102-1
103 <u>Award and Execution of Contract</u>	103-1
104 <u>Scope of Work</u>	104-1
105 <u>Control of Work</u>	105-1
106 <u>Control of Materials</u>	N/A
107 <u>Legal Regulations and Responsibility to Public</u>	107-1
108 <u>Commencement, Prosecution and Progress</u>	108-1
109 <u>Measurements and Payments</u>	109-1
110 <u>Notification of Changed Conditions and Dispute Resolution</u>	110-1
111 <u>Health & Safety</u>	111-1

SECTION 101 – ABBREVIATIONS AND DEFINITIONS

If there are any discrepancies between this document and the City code, the City code will govern.

SUBSECTION 101.1 ABBREVIATIONS add the following:

COY – City of Yuma

YC – Yuma County

SUBSECTION 101.2 DEFINITIONS AND TERMS add the following definition:

Solicitation: The book or pamphlet pertaining to a specific project, containing proposal forms, special provisions and other information necessary for and pertinent to the preparation of the proposal or bid.

REPLACE THE FOLLOWING DEFINITIONS:

County: Yuma County, organized and existing under and by virtue of the laws of the State of Arizona

Contracting Agency: The City of Yuma

Major Item: The total of any item of work and/or materials specified in the bid form that exceeds the amount established in Table 109-1.

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

SUBSECTION 102.2 CONTENTS OF PROPOSAL PAMPHLET delete subsection in its entirety and replace with the following:

102.2 CONTENTS OF BID SOLICITATION

The prospective bidder may examine the solicitation through www.azpurchasing.org

The solicitation will state the location of the contemplated construction; give the description of the various quantities of work to be performed or materials to be furnished, and have a bid form of pay items for which unit bid prices are invited. In addition, it will state the form and amount of the proposal guarantee, the time in which the work shall be completed and include additional instructions not included in these specifications.

The plans, the standard specifications, the standard details, the special provisions, the contracting agency's supplements and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In a case of a discrepancy or conflict, the order in which the various documents shall govern is as follows from highest to lowest: addenda, special provisions, plans, agency's supplements to the standard specifications, agency's supplements to the standard details, standard specifications and standard details.

Each and every provision of law and clause required by law to be inserted in the contract shall be deemed to be inserted herein, and the contract shall be read and enforced as though it were included herein.

SUBSECTION 102.6 SUBCONTRACTORS LIST delete subsection in its entirety and replace with the following:

The list of subcontractors shall be provided in the bid form. The bidder shall list the firm name and business address of each specialty subcontractor to whom the bidder proposes to subcontract any portion of the work. The bidder shall only one firm name for each category.

The bidder may list itself to perform one or more of the listed categories of work for which he has any requisite State licenses.

SUBSECTION 102.8 PROPOSAL GUARANTEES delete subsection in its entirety and replace with the following:

As required by A.R.S. § 34-201, as amended, each bid must be accompanied by a certified check, cashier's check, or surety bond payable to the City of Yuma for at least ten percent (10%) of the total bid price as a guarantee that the bidder enter into a contract to perform the Project in accordance with the Plans and Project Manual, within ten (10) days after the Notice of Award. The surety bond must be issued by a company authorized to transact surety business in the State of Arizona.

If a surety bond is used, the surety bond shall be executed solely by a surety company or companies holding a certificate of authority pursuant to Transact surety business in the State of Arizona issued by the Director of the Department of Insurance. The surety bond shall not be executed by an individual surety or sureties. In addition, said company or companies shall be rated "Best A-" or better as required by the Contracting Agency, as currently listed in the most recent Best Key Guide, published by the A.M. Best Company

SUBSECTION 102.9 SUBMISSION OF PROPOSAL delete subsection in its entirety and replace with the following:

Proposals (Bid) and bid guarantee (Bid Bond) must be received in a sealed envelope identifying on the outside of the envelope the contractor name, contractors complete address, solicitation number and title. The sealed envelope must be received by the City of Yuma's Purchasing Division One City Plaza, Yuma Arizona 85364-1436 by the specified date and time in the solicitation or as indicated in addenda.

Any proposal received after the stated deadline identified (unless changed by addendum), will not be considered and will be returned unopened to the sender at sender's expense if sender wants the proposals to be returned. No oral or electronically transmitted proposal will be considered.

SUBSECTION 102.10 WITHDRAWAL OR REVISION OF PROPOSAL delete subsection in its entirety and replace with the following:

Any bidder may withdraw or revise a proposal after it has been deposited with the Contracting Agency, provided the bidder's request is received by the Contracting Agency, in writing, before the time specified for opening proposals or as stipulated herein.

SUBSECTION 102.11 PUBLIC OPENING OF PROPOSALS delete subsection in its entirety and replace with the following:

Sealed proposals received will be opened and publicly read aloud at the date and time and location specified in the solicitation, unless changed by addenda. The time/date recorder located in the Purchasing Division will be used to record the official time of receipt.

SUBSECTION 102.13 SUCCESSFUL BIDDERS delete subsection in its entirety and replace with the following:

Unless otherwise specified in the solicitation, the successful bidder may obtain one (1) set of plans and special provisions, for the project from the Contracting Agency, at no cost, and electronic access to all appropriate files.

SECTION 103 – AWARD AND EXECUTION OF CONTRACT

SUBSECTION 103.1 CONSIDERATION OF PROPOSAL delete last paragraph in its entirety

SUBSECTION 103.2 RETURN OF PROPOSAL GUARANTEE delete subsection in its entirety and replace with the following:

All proposal guarantees will be returned immediately (except Bid Bonds) after the contract documents have been executed by all parties. If a check has been received in lieu of a bid bond, the COY will issue a check to refund the Contractor. Bid bonds will be kept in bid file.

SUBSECTION 103.6.1 GENERAL (A) MINIMUM LIMITS OF LIABILITY delete subsection in its entirety and replace with the following:

The following limits are typical minimum requirements, but may be subject to change depending on project size/type requirements.

A. General.

- (1) Insurer Qualifications. Without limiting any obligations or liabilities of the Contractor, the Contractor shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies duly licensed by the State of Arizona with an AM Best, Inc. rating of A- or above with policies and forms satisfactory to the City. Failure to maintain insurance as specified herein may result in termination of this Agreement at the City's option.
- (2) Additional Insured. All insurance coverage and self-insured retention or deductible portions, except Workers' Compensation insurance and Professional Liability insurance, if applicable, shall name, to the fullest extent permitted by law for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees as Additional Insured as specified under the respective coverage Parts of this Agreement.
- (3) Coverage Term. All insurance required herein shall be maintained in full force and effect until all work or services required to be performed under the terms of this Agreement are satisfactorily performed, completed and formally accepted by the City, unless specified otherwise in this Agreement.
- (4) Primary Insurance. The Contractor's insurance shall be primary, non-contributory insurance with respect to performance of this Agreement and in the protection of the City as an Additional Insured.

- (5) Waiver. All policies, except for Professional Liability, including Workers' Compensation insurance, shall contain a waiver of rights of recovery (subrogation) against the City, its agents, representatives, officials, officers and employees for any claims arising out of the work or services of the Contractor. The Contractor shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.
- (6) Policy Deductibles and/or Self-Insured Retentions. The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to the City. The Contractor shall be solely responsible for any such deductible or self-insured retention amount.
- (7) Use of Subcontractors. If any work under this Agreement is subcontracted in any way, the Contractor shall execute written agreements with its subcontractors containing the indemnification provisions set forth in the Contract and insurance requirements set forth herein protecting the City and the Contractor. The Contractor shall be responsible for executing any agreements with its subcontractors and obtaining certificates of insurance verifying the insurance requirements.
- (8) Evidence of Insurance. Prior to commencing any work or services under this Agreement, the Contractor will provide the City with suitable evidence of insurance in the form of certificates of insurance and a copy of the declaration page(s) of the insurance policies as required by this Agreement, issued by the Contractor's insurance insurer(s) as evidence that policies are placed with acceptable insurers as specified herein and provide the required coverages, conditions and limits of coverage specified in this Agreement and that such coverage and provisions are in full force and effect. Confidential information such as the policy premium may be redacted from the declaration page(s) of each insurance policy, provided that such redactions do not alter any of the information required by this Agreement. The City shall reasonably rely upon the certificates of insurance and declaration page(s) of the insurance policies as evidence of coverage but such acceptance and reliance shall not waive or alter in any way the insurance requirements or obligations of this Agreement. In the event any insurance policy required by this Agreement is written on a "claims made" basis, coverage shall extend for two years past completion of the Services and the City's acceptance of the Contractor's work or services and as evidenced by annual certificates of insurance. If any of the policies required by this Agreement expire during the life of this Agreement, it shall be the Contractor's responsibility to forward renewal certificates and declaration page(s) to the City 30 days prior to the expiration date. All certificates of insurance and declarations required by this Agreement shall be identified by referencing the RFP number and title of this Agreement. Additionally, certificates of insurance and

declaration page(s) of the insurance policies submitted without referencing the appropriate RFP number and title or reference to this Agreement, as applicable, will be subject to rejection and may be returned or discarded. Certificates of insurance and declaration page(s) shall specifically include the following provisions:

- i. The City, its agents, representatives, officers, directors, officials and employees are Additional Insureds as follows:
 1. Commercial General Liability - Under Insurance Services Office, Inc., ("ISO") Form CG 20 10 03 97 or equivalent.
 2. Auto Liability - Under ISO Form CA 20 48 or equivalent.
 3. Excess Liability - Follow Form to underlying insurance.
 - ii. The Contractor's insurance shall be primary insurance as respects performance of the Agreement.
 - iii. All policies, except for Professional Liability, but including Workers' Compensation, waive rights of recovery (subrogation) against the City, its agents, representatives, officers, officials and employees for any claims arising out of work or services performed by the Contractor under this Agreement.
 - iv. A 30-day advance notice cancellation provision. If ACORD certificate of insurance form is used, the phrases in the cancellation provision "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" shall be deleted. Certificate forms other than ACORD form shall have similar restrictive language deleted.
- (9) Umbrella/Excess Liability. The Contractor must carry Umbrella/Excess Liability insurance with an unimpaired limit of not less than \$5,000,000 per occurrence combined limit Bodily Injury and Property Damage that "follows form" and applies in excess of the Commercial General Liability, Commercial/Business Automobile Liability and Employer's Liability, as required above.

If the City required testing of equipment or other similar operations, the Contractor is responsible for providing appropriate insurance as may be deemed necessary by the City.

B. Required Insurance Coverage.

- (1) Commercial General Liability. The Contractor shall maintain “occurrence” form Commercial General Liability insurance with an unimpaired limit of not less than \$1,000,000 for each occurrence, \$2,000,000 Products and Completed Operations Annual Aggregate and a \$2,000,000 General Aggregate Limit. The policy shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury. Coverage under the policy will be at least as broad as ISO policy form CG 00 010 93 or equivalent thereof, including but not limited to, separation of insured’s clause. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, officials and employees shall be cited as an Additional Insured under ISO, Commercial General Liability Additional Insured Endorsement form CG 20 10
- (2) 03 97, or equivalent, which shall read “Who is an Insured (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of “your work” for that insured by or for you.” If any excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.
- (3) Vehicle Liability. The Contractor shall maintain Business Automobile Liability insurance with a limit of \$1,000,000 each occurrence on the Contractor’s owned, hired and non-owned vehicles assigned to or used in the performance of the Contractor’s work or services under this Agreement. Coverage will be at least as broad as ISO coverage code “1” “any auto” policy form CA 00 01 12 93 or equivalent thereof. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, the City, its agents, representatives, officers, directors, officials and employees shall be cited as an Additional Insured under ISO Business Auto policy Designated Insured Endorsement form CA 20 48 or equivalent. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.
- (4) Professional Liability. If this Agreement is the subject of any professional services or work, or if the Contractor engages in any professional services or work adjunct or residual to performing the work under this Agreement, the Contractor shall maintain Professional Liability insurance covering negligent errors and omissions arising out of the Services performed by the Contractor, or anyone employed by the Contractor, or anyone for whose negligent acts, mistakes, errors and omissions the Contractor is legally liable, with an unimpaired liability insurance limit of \$2,000,000 each claim and \$2,000,000 annual aggregate. In the event the Professional Liability insurance policy is

written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Services, and the Contractor shall be required to submit certificates of insurance and a copy of the declaration page(s) of the insurance policies evidencing proper coverage is in effect as required above.

- (5) Workers' Compensation Insurance. The Contractor shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over the Contractor's employees engaged in the performance of work or services under this Agreement and shall also maintain Employers Liability Insurance of not less than \$500,000 for each accident, \$500,000 disease for each employee and \$1,000,000 disease policy limit.

- C. Cancellation and Expiration Notice. Insurance required herein shall not expire, be canceled, or materially change without 30 days' prior written notice to the City.

If the COY requires testing of equipment or other similar operations, the CONTRACTOR is responsible for providing appropriate insurance as may be deemed necessary by the City.

SECTION 104 – SCOPE OF WORK

SUBSECTION 104.1.1 GENERAL delete subsection in its entirety and replace with the following:

The Contractor shall perform all work necessary to complete the contract in a satisfactory and acceptable manner in full compliance with the plans, specifications and terms of the contract.

In the event a conflict exists between Contract Documents the order of precedence listed in descending order shall be as follows:

- Change Orders
- Addenda
- Special Provisions
- Project Plans/Drawings
- COY supplement to the MAG Uniform Standard Specifications and Details
- MAG Uniform Standard Specifications
- COY Standard Details

Unless otherwise specified in the special provisions, the Contractor shall furnish all labor, materials, equipment, transportation, utilities, services and facilities required to perform all work for the construction of the project within the time specified.

SUBSECTION 104.1.4 CLEANUP AND DUST CONTROL delete third paragraph in its entirety and replace with the following:

The Contractor shall take whatever steps, procedures or means required preventing any dust nuisance due to the Contractor's construction operations. The dust control measures shall be maintained at all times to the satisfaction of the Engineer and in accordance with the requirements of the Yuma County Air Quality Rules and Regulations.

SUBSECTION 104.2.2*(A) DUE TO PHYSICAL CONDITIONS delete subsection in its entirety and replace with the following:

*(A) Should the Contractor encounter or discover prior to or during the process of the work, subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or unknown physical conditions at the site of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract, the Contractor shall promptly notify the Engineer in writing of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions and, if the Engineer finds such conditions do so materially differ and cause an increase or decrease in the cost of or the time required for performance of the contract, an equitable adjustment will be made and the contract modified in writing accordingly.

[104-1](#)

SUBSECTION 104.2.6 AS-BUILTS add the following subsection:

No later than 14 Calendar Days the Engineer will provide AutoCAD files of the Design Plans to the Contractor for use in developing the As-built Plans. The Contractor shall, in separate and readily identifiable "As-built" layer(s), reflect all cases where the Construction Work changes, adds to, or differs from the As Designed Plans.

The Contractor shall submit one large set of Mylar As-Built Plans, one reduced set of As-Built Plans, two CDs of the As-Built PDF file and two CDs of the As-Built AutoCAD file to the Engineer upon completion of the Project.

The Final Project Payment will not be processed until the As-Built Plans have been reviewed and accepted by the Engineer.

DRAFT

SECTION 105 – CONTROL OF WORK

SUBSECTION 105.2 PLANS AND SHOP DRAWINGS delete subsection in its entirety and replace with the following:

The Contractor shall submit, for review, a proposed schedule of shop drawings and product data submittals. This schedule will include concrete and asphalt concrete mix designs unless they are previously approved supplier's mix design. The schedule will show the needed response date for each submittal and will indicate the relationship of the submittal to the project construction schedule.

Shop drawings for major temporary support structures such as falsework, shoring, soldier piles, and other major temporary structures that facilitate construction shall be prepared by and bear the seal and signature of a Professional Engineer. Temporary support structures for Minor Structures as defined in Section 505.1.1 are exempt from this requirement.

The Contractor shall submit copies of each shop drawing, product data or mix design to the Engineer for review. Each submittal shall be numbered sequentially and shall be submitted in accordance with the schedule established in conjunction with the Contracting Agency so as to cause no delay in the work schedule. The Contractor shall certify, by stamp or letter, that the Contractor has reviewed and approved the submittal and that the submittal conforms to the requirements of the contract documents. If this certification is not included, the submittal will be returned without action.

At the time of each submittal, the Contractor shall define and delineate in writing, separate from the certification, any deviations from the contract documents. If the Engineer accepts this deviation, the Engineer will authorize the deviation by issuing a change order or if the deviation is minor by endorsement to the letter.

The Engineer will review and return the submittals in accordance with the previously established response date. The review will be only for conformance with the design concept of the work and for compliance with the information contained in the contract documents. The review of a specified item, as such, will not indicate review of the assembly in which the item functions. Review by the Engineer will not relieve the Contractor from responsibility for any errors or omissions in the submittals nor from the Contractor's responsibility for complying with the contract documents. The only exception is deviations accepted in accordance with the preceding paragraph.

If the submittal is acceptable, one (1) copy with each page stamped "Approved As Submitted" will be returned to the Contractor. The Contractor shall submit additional copies (as required) to the Engineer.

If the Engineer determines that the submittal requires corrections or is to be rejected, one (1) copy stamped "Approved As Noted" or "Returned For Corrections Noted & Resubmittal" will be returned to the Contractor. The Contractor will submit five (5) corrected or new copies.

The copy stamped "Approved As Submitted," returned to the Contractor, will become a part of the contract documents and will be kept at the job site. Any work done prior to the receipt of this review will be at the Contractor's risk and expense.

[105-1](#)

SUBSECTION 105.8 CONSTRUCTION STAKES, LINES AND GRADES delete subsection in its entirety and replace with the following.

The Contractor shall provide all Construction Staking on the Project.

The basic reference lines, bench marks and control points from which the Contractor shall establish all points and controls needed to construct the Project are identified in the Plans.

Construction Staking shall consist of performing all Construction Staking essential for the control and completion of the Project, in accordance with the specifications and in conformity with the lines, grades, and details shown on the plans or as established by the Engineer. The Contractor shall establish and lay out the necessary project control points, and shall perform all staking necessary to properly complete and control the work.

Using the data and information provided in the plans, the Contractor shall verify the accuracy of the plans by checking the vertical and horizontal alignments and the plan details. This verification shall be accomplished prior to starting any construction operations and, as a minimum, shall include the verification of all elevations, grades, stationing, distances, offsets, dimensions and any other information shown on the plans.

Any errors, discrepancies or omissions discovered by the Contractor shall immediately be brought to the attention of the Engineer.

SECTION 107 – LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

SUBSECTION 107.5 SAFETY, HEALTH AND SANITATION PROVISIONS delete first paragraph in its entirety and replace with the following:

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements and regulations of the Arizona State Department of Health or as specified by the Yuma County Health Department, Sanitary Code.

SECTION 107.6.3 CONSTRUCTION NOTICE add the following subsection:

The Contractor, at least seven days prior to starting any construction activities or phases, shall distribute Construction Notice Flyers to all affected residences, businesses and other interests in the immediate vicinity of the Project. The Contractor shall furnish a copy of the Construction Notice to the Engineer for approval prior to issuing the notice.

The Construction Notice shall include the Project name and description, the Contractor's name, a brief description of the work, the anticipated duration of the work in the immediate area, and the name(s) of the Contractor's contact(s) with phone number(s) where the Contractor can be contacted 24 hours, seven days per week.

The Contractor shall maintain a written log of all public inquiries and concerns, including a brief description of the concern, how the issue was resolved, and the day and time of the resolution. Copies of the written log shall be available for review as requested by the Engineer.

All costs associated with the Construction Notices shall be considered incidental to completion of the Project, and no direct payment will be made for this work.

SUBSECTION 107.7 BARRICADES AND WARNING SIGNS delete last paragraph in its entirety and replace with the following:

The Contractor shall erect warning signs in advance of any place on the project where operations may interfere with the use of the road by traffic, and at all intermediate points where the new work crosses or coincides with an existing road. Such warning signs shall be constructed and erected in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) adopted by the Contacting Agency's Traffic Engineering Department which is hereby made a part of these specifications.

SUBSECTION 107.9 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE delete third and fifth paragraphs in their entirety and replace with the following:

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, directive, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at no cost to the Contracting Agency, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner. Such damage will include but not be limited to landscaped areas. The Contractor shall regrade the disturbed area as directed and restore the surface material to match existing in type and quality.

the Engineer, the sod and/or plant material did not survive the transplanting in good condition, the Contractor shall replace the sod and/or plant material to match in type and quality. Also, the Contractor may salvage any sprinkler system materials, lighting materials, etc. In the event that it is not feasible to reinstall the salvaged material, new material shall be installed.

SECTION 108 – COMMENCEMENT, PROSECUTIONS AND PROGRESS

SUBSECTION 108.2 SUBLETTING OF CONTRACT add the following:

(F) The contractor shall submit affidavits of payment from each sub-contractor before final payment is made.

SUBSECTION 108.4.1 PRE-CONSTRUCTION AND POST CONSTRUCTION MEETINGS add this subsection:

Pre-Construction Meeting

The Contractor shall attend the Pre-Construction Project Meeting on the date and time scheduled by the Engineer.

The Contractor, at the Pre-Construction Meeting, shall submit the following documents for review and approval:

1. Name and Phone Number of Project Superintendent
2. Name of Person(s) authorized to execute Extra Work Orders and Change Orders.
3. Project Construction Schedule
4. Proposed Project Materials
5. Copy of the Notice of Intent (NOI) form filed with ADEQ
6. Traffic Control Plans (TCP), if a TCP has not been established in the plans

Post-Construction Meeting

The Contractor shall attend the Post-Construction Project Meeting on the date and time as scheduled by the Engineer. The Engineer will schedule the meeting no later than 14 days after Contractor addresses all issues on the Project Walk-Thru Inspection List.

At the Post-Construction Meeting the Contractor shall, if not already submitted, provide the following documents:

1. Consent of Surety
2. Contractor's Affidavit Regarding Settlement of Claims
3. As-Built Plans
4. Copy of the Notice of Termination (NOT) form filed with ADEQ
5. SWPPP Inspection Reports
6. Project Test Reports

All costs associated with the Pre-Construction and Post Construction Meetings shall be considered incidental to completion of the Project, and no direct payment will be made for this work.

The Contractor shall attend all Project Public Information Meetings and all Construction Progress Meeting as scheduled by the Engineer.

The Contractor shall conduct Public Information Meetings as deemed necessary by the Engineer for public involvement.

Unless otherwise determined by the Engineer, Weekly Project Construction Progress Meetings will be conducted during the life of the Project. The Contractor, at the Progress Meetings, shall provide a Project Schedule identifying the work that will be performed the coming week.

All costs associated with the Public Information and weekly Construction Progress Meetings shall be considered incidental to completion of the Project, and no direct payment will be made for this work.

SUBSECTION 108.5 LIMITATION OF OPERATIONS delete second paragraph in its entirety and replace with the following:

All traffic affected by the construction will be regulated in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) adopted by the Contracting Agency.

SUBSECTION 108.9 FAILURE TO COMPLETE ON TIME delete Table 108-1 in its entirety and replace with the following:

SCHEDULE OF LIQUIDATED DAMAGES			
ORIGINAL CONTRACT AMOUNT		LIQUIDATED DAMAGES PER DAY	
From More Than	To and Including	Calendar Day or Fixed Date	Working Day
\$ 0	\$ 100,000	\$ 350	\$ 500
\$ 100,000	\$ 500,000	\$ 490	\$ 700
\$ 500,000	\$ 1,000,000	\$ 840	\$ 1,200
\$ 1,000,000	\$ 2,000,000	\$ 910	\$ 1,300
\$ 2,000,000	\$ 5,000,000	\$ 1,190	\$ 1,700
\$ 5,000,000	\$ 10,000,000	\$ 1,540	\$ 2,200
\$ 10,000,000	\$ -----	\$ 2,380	\$ 3,400

SECTION 109 – MEASUREMENTS AND PAYMENTS

SUBSECTION 109.2.2 BID FORM CONTINGENCY AMOUNT add the following subsection:

The Contingency Amount, constituting the percentage shown on the Bid Form, will be used to cover the cost of item overruns and/or extra work that may be required during construction of the Project. The Contingency Funds will be used as directed and approved by the Engineer, and any Contingency Funds remaining at the end of the Project will be deleted from the Contract as part of the Final Change Order.

SUBSECTION *109.7 PAYMENTS FOR BOND ISSUE AND BUDGET PROJECTS (A)(1) delete subsubsection 109.7 (A)(1) in its entirety and replace with the following:

(1) No payment will be processed until the material or equipment has been observed, reviewed or verified by the Contracting Agent representative. Only the material or equipment meeting the requirements of the plans and specifications will be paid. Payment for material or equipment does not constitute final acceptance.

SECTION 110 – NOTIFICATION OF CHANGED CONDITIONS AND DISPUTE RESOLUTION

SUBSECTION 110.3.1 GENERAL add the following information to each Level:

- Level I. (Representative reviewed by: *Project Manager*)
- Level II. (Representative reviewed by: *City/Assistant Engineer*)
- Level III. (Representative reviewed by: *Department Head*)

SUBSECTION 110.3.3 PROCESS delete the first two paragraphs and subsubsection (B) in their entirety and replace with the following:

The Contracting Agency's Level I Representative will render a written decision regarding the matter in dispute within five (5) working days of receipt of the Contractor's notification that the dispute resolution process should begin.

The Contractor shall, upon receipt of the decision by the Level I Representative, either accept or reject the decision in writing. If the Contractor does not reject the Level I Representative's decision within five (5) working days of its receipt, the Contractor will be deemed to have accepted the decision, the dispute will be considered withdrawn from the administrative process, and there will be no further remedy.

DELETE SUBSUBSECTION (B) AND REPLACE WITH THE FOLLOWING:

(B) Arbitration: The decision of the Level III Representative in relation to the claim shall be final unless the dispute review board or arbitration is chosen as follows:

SUBSECTION 110.5 DISPUTE REVIEW BOARD delete this subsection in its entirety.

SECTION 111 – HEALTH & SAFETY add the following section:

111.1 CONFINED SPACE ENTRY

No entry shall be made into a confined space, tank, vat or pit without prior notification and approval by the COY Environmental Health & Safety (EH&S) and completion of a confined space entry permit

111.2 ELECTRICAL LOCK/OUT (TAG/OUT) STANDARD

The contractor shall not enter any electrical substation nor shut off any power without authorization of the COY Project Manager.

111.3 NOISE AND AIR POLLUTION

Noise - the contractor will inform the COY Project Manager of any operations that will create consistent sound level/s in excess of 90 decibels (A scale) at or around the work site.

Air Pollution - The contractor will inform the COY Project Manager of any potential air contamination that may be generated by the contractor(s) operation(s) such as dust, fumes, vapors, generators, etc. The contractor will take all reasonable precautions to minimize emissions of any air contaminant(s).

111.4 EXPECTATIONS

Ensure all Material Safety Data Sheets for chemicals intended for use on COY premises are available upon request.

Designate and identify one spokesperson to address any EH&S questions that may arise during the service. The spokesperson shall be available whenever work is being performed.

Maintain an accurate record of all accidents resulting in death, traumatic injury, occupational disease, or damage to any property whether or not that of the COY and promptly report any of the same to the COY EH&S and the COY Project Manager.

Take immediate action upon identification of any health or safety issue that affects COY personnel, the public, property, or could result in an injury to any worker.

Immediately inform the COY Project Manager upon receipt of any notice of violation, notice to comply, citation, or other enforcement document received from any regulatory agency.

111.5 PROJECT INFORMATION SIGNS

Project Information Signs shall be placed at each end of the Project prior to starting Construction Operations, and shall be in accordance with City of Yuma Standard No. 8-100 Work Zone Identification Sign and with the details in the Plans.

Project Information Signs will be measured by the unit per Each and will be paid for at the contract unit price per Each.

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[111-2](#)

CONSTRUCTION SPECIFICATIONS

PART 300 - STREETS AND RELATED WORK

Section Title	COY
301 Subgrade Preparation	301-1
306 Mechanically Stabilized Subgrade-Geogrid Reinforcement	N/A
309 Lime Slurry Stabilization or Modification of Subgrade	N/A
310 Placement and Construction of Aggregate Base Course	310-1
311 Placement and Construction of Cement Treated Subgrade	N/A
312 Cement Treated Base	N/A
315 Bituminous Prime Coat	N/A
317 Asphalt Milling	N/A
320 Road-mixed Surfacing	N/A
321 Placement and Construction of Asphalt Concrete Pavement	321-1
324 Portland Cement Concrete Pavement (PCCP)	N/A
325 Placement and Construction of Asphalt-Rubber Asphalt Concrete	N/A
327 Hot In-Place Recycling	N/A
329 Tack Coat	329-1
330 Asphalt Chip Seal	N/A
331 Microsurfacing Specifications	N/A
332 Placement and Construction of Asphalt Emulsion Slurry Seal Coat	N/A
333 Fog Seal Coats	N/A
334 Preservative Seal for Asphalt Concrete	N/A
335 Placement and Construction of Hot Asphalt-Rubber Seal	N/A
336 Pavement Matching and Surfacing Replacement	336-1
337 Crack Sealing	N/A
340 Concrete Curb, Gutter, Sidewalk, Curb Ramps, Driveway and Alley Entrance	340-1
342 Decorative Pavement Concrete Paving Stone	N/A
343 Exposed Aggregate Paving	N/A
345 Adjusting Frames, Covers, Valve Boxes Meter Boxes and Pull Boxes	345-1
350 Removal of Existing Improvements	350-1
355 Utility Potholes-Keyhole Method	N/A
360 Telecommunications Installation	N/A

SECTION 301 – SUBGRADE PREPERATION

SUBSECTION 301.2 PREPERATION OF SUBGRADE delete first paragraph in its entirety and replace with the following:

With the exception of areas where compacted fills have been constructed as specified in Section [211](#), in the areas where new construction is required, the moisture content shall be brought to that required for compaction by the addition of water, by the addition and blending of dry, suitable material or by the drying of existing material. The material shall then be compacted to the specified relative density. If pumping subgrade should become evident at any time prior to paving, the Engineer will require proof rolling with a pneumatic-tire roller or other approved equipment in order to identify the limits of the unacceptable area. The proof rolling will be performed at no additional cost to the Contracting Agency.

SUBSECTION 301.3 RELATIVE COMPACTION delete item (B) in its entirety and replace with the following:

(B) Below detached sidewalk not subject to vehicular traffic 95%

ADD THE FOLLOWING:

Compaction test every 300 linear feet per lift for roadways, curb and gutter and sidewalks.

Compaction test every 500 square feet for driveways.

SECTION 310 – PLACEMENT AND CONSTRUCTION OF AGGREGATE BASE COURSE

SUBSECTION 310.3 COMPACTION delete item (C) from this section in its entirety.

SUBSECTION 310.5 PAYMENT delete subsection in its entirety and replace with the following:

Payment for aggregate base course will be made on the basis of the contract unit price per ton or square yard unless an alternate basis of payment is provided in the proposal.

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[310-1](#)

SECTION 321 – PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

SUBSECTION 321.6 MIX PRODUCTION delete first paragraph in its entirety and replace with the following:

All materials shall be proportioned by weight in a hot mix asphalt plant in the proportions required by the mix design to provide a homogenous and workable mass. All measuring devices shall be calibrated at least annually by a technician licensed by the Arizona Bureau of Weights & Measures. Mixing plants shall conform to the requirements of AASHTO M-156, except as modified herein. If WMA technology is being used, any equipment associated with the production of hot mix asphalt shall be calibrated and in proper working order according to the WMA equipment specifications. If there are any deviations in the production or compacting temperatures of the hot mix asphalt with WMA technology, the mix design shall state the difference.

SUBSECTION 321.8.6 ASPHALT CONCRETE OVERLAY delete eighth (second to last) paragraph in its entirety and replace with the following:

Frames and covers of manholes, survey monuments, valve boxes, clean-outs and other existing structures shall be adjusted in accordance with Section 345 to set 3/8 of an inch below the finished surface of the new pavement, see City of Yuma Standard Details 4-040, 4-050, 4-080, 5-010, 5-044, 5-140, 5-142, 5-150, 5-210. During adjustment if pavement or base materials are removed or disturbed, they shall be replaced with approved materials installed in a manner acceptable to the Engineer.

SECTION 329 – TACK COAT

SUBSECTION 329.7 PAYMENT delete subsection in its entirety.

Tack coat is incidental to the asphalt concrete pavement.

DRAFT

[329-1](#)

SECTION 336 – PAVEMENT MATCHING AND SURFACING REPLACEMENT

SUBSECTION 336.1 DESCRIPTION delete second paragraph in its entirety and replace with the following:

Asphalt concrete roadway pavement replacement shall be constructed in accordance with Type A, B and T-Top of City of Yuma Construction Standard Details 5-070, 5-075, 5-080, 5-081, and Type C, D and E of MAG Standard Detail 200-1 and as indicated on the plans or in the special provisions.

SUBSECTION 336.3 TYPES AND LOCATIONS OF PAVEMENT AND SURFACING REPLACEMENT delete first paragraph in its entirety and replace with the following:

Normally, the type of pavement replacement and backfill required will be noted on the plans or specified in other portions of the contract documents and construction will be in accordance with Detail 200-1 and 200-2 for type C, D and E and City of Yuma Standard Details 5-070, 5-075, 5-080, 5-081 for types A, B and T-Top. If a type is not noted on the plans or specified in the special provisions, the following criteria will govern:

[336-1](#)

SECTION 340 – CONCRETE, CURB, GUTTER, SIDEWALK, CURB RAMPS, DRIVEWAY AND ALLEY ENTRANCE

SUBSECTION 340.3.1 SUBGRADE PREPARATION delete first two paragraphs and table 340.1 in their entirety and replace with the following:

The subgrade shall be constructed and compacted true to grades and lines shown on the plans and as specified in Section 301. All soft or unsuitable material will be removed to a depth of not less than 4 inches below subgrade elevation and replaced with material satisfactory to the Engineer.

SUBSECTION 340.3.4.1 EXPANSION JOINTS delete third paragraph in its entirety and replace with the following:

Sidewalk, curbs, and gutter expansion joints shall be installed at all radius points, at both sides of each driveway, at both sides of each alley entrance. The maximum distance between expansion joints shall be 20 feet.

[340-1](#)

SECTION 345 – ADJUSTING FRAMES, COVERS, VALVE BOXES, METER BOXES AND PULL BOXES

SUBSECTION 345.3 ADJUSTING FRAMES delete subsection in its entirety and replace with the following:

The Contractor shall loosen frames in such a manner that existing monuments, cleanouts, manholes, and valve boxes will not be disturbed or damaged. Debris shields shall be used to prevent debris from entering sanitary or storm sewers. All loose material and debris shall be removed from the excavation and the interiors of structures prior to resetting frames. If dirt or debris enters the sewer system the contractor shall be responsible for cleaning the sewer system for a minimum of one reach (the next downstream structure from the contamination point.)

Frames shall be set to 3/8" lower than pavement or the elevation established by the Engineer. Manhole frames shall be firmly blocked in place with masonry or metal supports. Spaces between the frame and the facility shall be sealed on the inside to prevent any concrete from entering the hand hole or manhole. A Class AA concrete collar shall be placed around and under the frames to provide a seal and properly seat the frame at the required elevation and slope. Concrete shall be struck off flush with the top of the existing pavement.

Adjustments of utilities, if located within the asphalt pavement, shall be made after placing the final surface course when there is only a single lift of pavement required. When there are multiple lifts of pavement required, adjustments may be made before the final surfacing or as directed by the Engineer.

SUBSECTION 345.4 ADJUSTING VALVE BOXES delete section in its entirety and refer to COY valve box installation standard 5-210 for adjusting valve boxes.

SUBSECTION 345.5 ADJUSTING MANHOLE AND VALVE COVERS WITH ADJUSTMENT RINGS delete subsection in its entirety and replace with the following:

Adjusting rings may be used to raise manhole covers in asphalt pavements when deemed acceptable by the Engineer. The amount of adjustment, thickness of seal or overlay, and cross slope will be considered when using adjusting rings. Each location where an adjusting ring is used must have a sufficient depth of asphalt to assure the proper installation and operation of the ring. The rings shall be made of a concrete, non-metallic, polypropylene or fiberglass material and installed per the manufacturer's specifications. The rings shall be approved by the Engineer.

The concrete collar ring around the frame or valve box shall be circular, and shall be a minimum of eight (8) inches thick, placed 3/8" below adjacent pavement surface. Concrete shall be a minimum of Class AA on all paved streets. All concrete shall be obtained from plants approved by the Engineer.

Each concrete ring shall be scored radially at quarter-circle points. Score lines shall be ¼ -inch wide by ½ - inch deep. The concrete collar surface shall be rough broom finished.

[345-1](#)

Traffic shall not be allowed on the concrete collars until the concrete had reached a minimum compressive strength of 3000 psi.

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SECTION 350 – REMOVAL OF EXISTING IMPROVEMENTS

SUBSECTION 350.2.1 UTILITIES delete the last paragraph in its entirety and replace with the following:

When Utilities are encountered that are not shown on the plans, the Engineer shall be notified and such utilities shall be included in the As-built drawings.

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[350-1](#)

CONSTRUCTION SPECIFICATIONS

PART 400 – RIGHT-OF-WAY AND TRAFFIC CONTROL

Section Title

401	Traffic Control	COY 401-1
405	Survey Monuments	405-1
410	Precast Safety Curbs	N/A
415	Flexible Metal Guardrail	N/A
420	Chain Link Fences	N/A
424	Parkway Grading	N/A
425	Topsoils	N/A
430	Landscaping and Planting	N/A
440	Sprinkler Irrigation System Installation	N/A

SECTION 401 – TRAFFIC CONTROL

SECTION 401.2.1 TYPE III (HIGH INTENSITY) REFLECTIVE SIGN SHEETING add the following subsection:

The Contractor shall use Type III High Intensity Sheeting on all temporary Traffic Control Signs and Detour Signs that are placed on this Project. The Sheeting shall comply with the ASTM D4956 designation for Type III High Intensity Retroreflective Sheeting Material.

SECTION 401.5 GENERAL TRAFFIC REGULATIONS add the following:

The Contractor shall inspect all Traffic Control Devices at least twice daily to assure that they are in compliance with the approved Traffic Control Plan and to ensure that they are in good condition. The Traffic Control Plan and Devices shall be inspected at the start of each work day and during holidays, weekends and other non-working days. The Contractor shall keep a log of all inspections and any corrective action taken, and the log shall be available for review upon request by the Engineer or the Engineer's representative.

The current progress payment for Traffic Control bid item will not be processed until all corrective actions have been taken to the satisfaction of the Engineer.

The Contractor shall provide the name and telephone number of the person(s) assigned to inspect and maintain the Traffic Control Plan and Devices to the Engineer and they shall be available and on-call 24 hours a day.

The Contractor is further advised that during construction the Traffic Engineer may determine that the in-place Traffic Control must be modified or that additional traffic control is required. Any such modifications or additions to the existing Traffic Control shall be accomplished by the Contractor at no additional cost.

SECTION 401.7 PAYMENT add the following:

Payment, as requested by the Contractor for this item, will be effected as follows:

1. 30% of the bid item amount will be paid with the first invoice.
2. 30% of the bid item amount will be paid with the second invoice.
3. 40% of the bid item amount will be paid with the Final Invoice.

SECTION 405 – SURVEY MONUMENTS

SECTION 405.3 CONSTRUCTION add the following:

The Contractor, under the supervision of the City of Yuma's Registered Land Surveyor (City Surveyor), shall set the Survey Monuments in accordance with the plans and with the following City of Yuma Construction Standard Detail Drawings, as applicable:

Standard No. 4-010 Survey Monument Specifications

Standard No. 4-020 Typical Subdivision Monuments

Standard No. 4-080 Survey Monument and Placement

Standard No. 4-090 Survey Frame & Cover

Standard No. 4-100 Survey Monument Stamping

The Contractor shall contact the City Surveyor prior to placing any Survey Monuments, and the City Surveyor will specify the Type of Monument(s) to be placed and will identify the location(s) where the Survey Monument(s) will be set.

For installation by the Contractor, the City Surveyor will provide the pre-stamped brass caps, and if required, the Frames and Covers. The Contractor shall provide all additional labor, equipment and materials necessary to install the Monuments.

The City Surveyor will record the Survey Monuments.

[405-1](#)

CONSTRUCTION SPECIFICATIONS

PART 500 - STRUCTURES

Section Title

505	Concrete Structures
506	Precast Prestressed Concrete Members
510	Concrete Block Masonry
511	Brick Masonry
515	Steel Structures
520	Steel and Aluminum Handrails
525	Pneumatically Placed Mortar
530	Painting

COY

N/A
506-1
N/A
N/A
N/A
N/A
N/A
N/A

SECTION 506 – PRECAST PRESTRESSED CONCRETE MEMBERS

SECTION 506.2 CONCRETE delete the third paragraph and replace with the following:

The compressive strength of the concrete will be determined from concrete test cylinders cured per ASTM C32/C31M-15 Standard Practice for Making and Curing Concrete Test Specimens in the Field.

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[506-1](#)

CONSTRUCTION SPECIFICATIONS

PART 600 - WATER AND SEWER

Section Title	COY
601 Trench Excavation, Backfilling and Compaction	601-1
602 Trenchless Installation of Steel Casing	N/A
604 Placement of Controlled Low Strength Material	604-1
605 Subdrainage	N/A
607 Trenchless Installation of Smooth Wall Jacking Pipe	N/A
610 Water Line Construction	610-1
611 Water, Sewer and Storm Drain Testing	611-1
615 Sanitary Sewer Line Construction	N/A
616 Reclaimed Water Line Construction	N/A
618 Storm Drain Construction	618-1
620 Cast-in-place Concrete Pipe	N/A
621 Corrugated Metal Pipe and Arches	N/A
625 Manhole Construction and Drop Sewer Connections	625-1
630 Tapping Sleeves, Valves and Valve Boxes on Water Lines	630-1
631 Water Taps and Meter Service Connections	631-1

SECTION 601 - TRENCH EXCAVATION, BACKFILLING AND COMPACTION

SUBSECTION 601.2.11 OPEN TRENCH SAFETY add the following:

Trench safety is the Contractor's responsibility and shall be the responsibility of the Contractor's "Competent Person" per 29CFR part 1926.32(f). All excavations shall be made in accordance with OSHA regulations. Trench walls shall be firmly braced in contact with the shoring equipment or shall be sloped, both in accordance with OSHA requirements.

Open trenches are to be properly protected throughout the workday in order to protect workers, pedestrians, vehicles, equipment and materials. Protection includes, but is not limited to, the use of shoring, barricades, cones, flaggers, signs, vehicular-rated steel plates, etc., in accordance with applicable OSHA regulations. Trenches are not allowed to be left unattended or unprotected for any duration of time during the workday.

The Contractor shall submit to the Engineer, the name and credentials of the "Competent Person" in charge of trench safety prior to start of construction. The "Competent Person" shall be onsite during all excavation and pipeline installation activities. The Engineer may stop all work if the "Competent Person" is not onsite.

SUBSECTION 601.4.2 BEDDING delete subsection in its entirety and replace with the following:

Bedding is the material upon which a pipe is to be placed.

The bedding material type shall be clean sand unless otherwise specified.

SUBSECTION 601.4.3 HAUNCHING delete subsection in its entirety and replace with the following:

Haunching is the material placed between the bedding and springline. If placed in lifts, the lift thickness shall not exceed 2 feet (1 foot for flexible pipe) and shall be deposited and compacted to the specified density uniformly on each side of the pipe to prevent lateral displacement of the pipe.

The haunching material shall be clean sand. With Agency approval an alternative granular material or CLSM may be used.

SUBSECTION 601.4.4 INITIAL BACKFILL delete subsection in its entirety and replace with the following:

601.4.4 BACKFILL: Trench backfill within City of Yuma rights-of-way may be obtained from trench excavation and should be clean and free from objectionable material. If clay, caliche, or rock is encountered in the trench excavation it shall be separated and removed and replaced with material meeting the backfill gradation requirements. All earth backfill shall be compacted to at least 95% of maximum dry density as measured by the Standard Proctor Method in accordance with the ASTM D 698.

Water settlement is prohibited at all times as a method of trench backfill compaction. In place moisture density tests, concrete testing, ABC slurry testing, and asphalt testing shall be ordered by the Engineer to ensure that all materials comply with the specified requirements. Quality Assurance (QA) tests will be performed by approved materials testing laboratory with the cost paid for by the City of Yuma. Quality Control (QC) is responsibility of the Contractor.

For trench backfill above pipe bedding and below pavement section aggregate base course, the Contractor shall use clean material from trench excavation meeting the following gradation and PI requirements:

SCREEN SIZE	PERCENT PASSING
1 Inch	100
¾ Inch	90
½ Inch	75
¼ Inch	60
#30	50-100
#200	<12

PI maximum of 2.

For pipe bedding to 6 inches over the top of the pipe the Contractor shall use clean sand backfill meeting the following gradation and PI requirements:

SCREEN SIZE	PERCENT PASSING
#4	100
#30	50-100
#200	<12

PI maximum of 2.

If re-compaction is necessary, additional tests shall be performed at the Contractor's expense. Re-testing costs shall be deducted from monies due or to become due the Contractor. The Contractor shall be required to fill all trenches that settle. If repaved areas settle, the Contractor shall perform all work necessary, at no additional cost to the City, to remove the asphalt, correct the settlement, repave, and re-stripe the affected trench locations.

The Contractor shall submit sand slurry mix designs, CLSM mix designs, concrete mix designs, and asphalt mix designs to the Engineer for approval. Submittal shall be at least 30 days prior to the incorporation of the materials into the work. The Contractor shall make plant facilities available in the event the Engineer elects to sample materials at the source.

Slurry placed as backfill shall be vibrated in place to provide consolidation and uniformity of the slurry material.

Imported sand bedding, embedment, cover, slurry, CLSM and backfill utilized for the waterlines and sanitary sewer lines construction shall not be measured and paid for separately.

SUBSECTION 601.4.5 FINAL BACKFILL delete subsection in its entirety

SUBSECTION 601.4.6 COMPACTION DENSITIES replace table 601-2 with the following:

**TABLE 601-2
MINIMUM TRENCH COMPACTION DENSITIES**

Backfill Type	Location	From Surface to 2 feet below Surface	From 2 feet below Surface to 1 foot above Top of Pipe	From 1 foot above Top of Pipe to Bottom of Trench
I	Under any existing or proposed pavement, curb, gutter, attached sidewalk, roadway shoulders, and other areas within right-of-way subject to vehicular traffic, or when any part of the trench excavation is within 2-feet of the existing pavement, curb, or gutter.	100% for granular 95% for non-granular	95%	95%
II	On any utility easement or right-of-way outside limits of Type I backfill.	95%	95%	95%
III	Around any structures (manholes, etc.) or exposed utilities outside limits of Type I Backfill.	95% in all cases		

SUBSECTION 601.4.7 WATER CONSOLIDATION delete this subsection in its entirety:

SUBSECTION 601.4.9 RIGHTS-OF-WAY BELONGING TO OTHERS delete subsection in its entirety and replace with the following:

Backfill and compaction for irrigation lines in other entity's right-of-way outside the limits of the Contracting Agency shall be accomplished in accordance with their permit and/or specifications.

SUBSECTION 601.5 CONTRACTOR CERTIFICATION OF INSTALLATION PROCEDURES delete the first paragraph in its entirety and replace with the following:

When requested in the Special Provisions or by the Engineer prior to installation, the Contractor shall furnish to the Contracting Agency an affidavit (certification) from the pipe manufacturer (or his designee) stating that the Contractor is familiar with the manufacturer's suggested installation methods and procedures and the manufacturer's suggested installation methods and procedures are consistent with COY requirements.

[601-3](#)

SECTION 604 – PLACEMENT OF CONTROLLED LOW STRENGTH MATERIAL

SUBSECTION 604.1 DESCRIPTION delete last paragraph in its entirety and replace with the following:

1 SACK: Structural backfill under foundations and as thermal fill and/or mechanical protection of duct banks and conduits.

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[604-1](#)

SECTION 610 – WATER LINE CONSTRUCTION

SUBSECTION 610.3 MATERIALS delete subsection in its entirety and replace with the following:

All pipes for water lines shall be of the classes shown on the plans or as specified below.

(A) The 4-inch through 12-inch diameter pipe sizes may be PVC C900 or ductile iron, except where a particular material is specified by the City of Yuma or the contract documents. All pipes shall be minimum 235 psi design unless otherwise specified.

(B) Pipe 16 inches through 20 in Diameter shall be AWWA C905, ductile iron when exposed or above ground.

(C) Pipe Size 20 inch and larger shall be Ductile Iron Pipe

Ductile iron water pipe and fittings per: Section [750](#). C900 PVC per: AWWA C900-12.

Service material containing brass or bronze must comply with the current NSF 61-8 standards at the time the project begins.

All brass or bronze service material must meet the current AWWA C-800 standards.

Any product used in water line construction containing brass or bronze that comes in contact with potable water shall meet the current NSF standards and federal law.

SUBSECTION 610.4.1 TRENCHING/COVER delete first three paragraphs in their entirety and replace with the following:

All water mains shall have a minimum cover of 42 inches over the top of the pipe.

SUBSECTION 610.4.3 BLOCKING AND RESTRAINTS delete subsection in its entirety and replace with the following:

All pipe lines, valves and fittings 16 inches and smaller in diameter shall be blocked with concrete thrust blocks in accordance with standard details. Thrust block areas for pipe, valves and fittings larger than 16 inches in diameter shall be installed per details shown on the plans. The areas stipulated in the standard details are minimums and shall not be decreased.

If irregular soil or pressure conditions are encountered, a thrust block design revision or an alternate joint restraint system may be required by the Engineer.

When restrained/welded joints are specified to resist thrust forces, blocking is required.

[610-1](#)

SUBSECTION 610.5.5 EXTRA PROTECTION delete subsection in its entirety and replace with the following:

New water lines that require extra protection from new sewer lines shall have extra protection provided by using AWWA C909 PVC pipe for both lines. Lines of standard pipe length shall be centered at the point of crossing so that no joints exist within seven (7) feet horizontal and only restrained or mechanical joints exist within ten (10) feet horizontal.

New water lines that require extra protection from sewer lines shall have identification wrap and/or tape installed on the water and sewer lines for the length that requires extra protection for each line.

New water lines that require extra protection from existing sewer lines shall be constructed using the extra protection specified for new water lines, and the existing sewer line:

- (1) shall be reconstructed using a standard length of AWWA C909 PVC pipe centered at the point of crossing so that no joints exist within seven (7) feet horizontal and only restrained or mechanical joints exist within ten (10) feet horizontal, or
- (2) shall be encased in 6 inches of concrete for the horizontal distance of the line that requires extra protection but for a distance no less than ten (10) feet horizontal.

Existing water lines that require extra protection from new sewer lines shall provide for extra protection by:

- (1) constructing the new sewer line and reconstructing the existing water line using AWWA C909 PVC pipe for both lines with standard pipe lengths centered at the point of crossing so that no joints exist within six (feet) horizontal and restrained or mechanical joints exist within ten (10) feet horizontal, or
- (2) encasement of both the existing water line and the new sewer line in six (6) inches of concrete for the horizontal distance of the lines that require extra protection but for a distance no less than ten (10) feet horizontal.
- (3) Extra protection for existing ductile iron water lines can be met by the installation of restrained or mechanical joints on the existing water line within ten (10) feet horizontal of the crossing and either
 - (a) construction of new sewer line using a standard pipe length of AWWA C909 PVC pipe centered at the point of crossing so that no joints exist within seven (7) feet horizontal and restrained or mechanical joints exist within ten (10) feet horizontal, or
 - (b) encasement of the new sewer line in 6 inches of concrete for the horizontal distance of the line that requires extra protection but for a distance no less than ten (10) feet horizontal.

SUBSECTION 610.7 VALVES delete butterfly valves from this section

SUBSECTION 610.8 MANHOLES AND VAULTS delete cast iron steps from this section

SUBSECTION 610.10 COUPLINGS, JOINTS, GASKETS AND FLANGES delete subsection in its entirety and replace with the following:

Couplings: The couplings used to join the pipe to flanged valve adapters shall have a minimum working pressure of 150 psi, and shall have a fusion-bonded epoxy finish. The coupling sleeves shall be stainless steel Type 316 with a minimum yield of 30,000 psi. The flanges shall have a minimum yield of 30,000 psi and be stainless steel Type 316.

Joints: The joints and fitting shall conform to Sections [750](#) and [752](#).

Bolts and Nuts:

(1) Bolts, studs, and nuts used in underground field flanged connections or for connecting fittings shall be minimum stainless steel Type 304. All bolt diameters shall normally be 1/8 inch smaller than the bolt hole diameter. All bolts shall be hexagonal heads.

(2) The minimum requirement for underground mechanical joint connections using T-head bolts shall meet the requirements of AWWA C111 using a high strength stainless steel manufactured for atmospheric corrosion resistance per ASTM A242.

These bolted joints shall be protected as follows: Following installation and before backfilling, all couplings, steel flanges, bolts, nuts, anchor bolts and rods, bolting of all flanged valves, and all exposed steel shall be protected from corrosion by either of the two methods outlined below at the Contractor's option.

Cocoon Method: The cocoon is formed by placing glass fiber cloth or roofing paper, of the proper width, around the underside of the connection and adjacent exposed steel pipe. The edges of the cocoon shall be securely fastened to the pipe. Backfill is lightly placed to the spring line, and the top of the cocoon is opened and layed back on the filled area and hot coal-tar enamel poured, from one side only, until the cocoon is completely filled. The loose backfill prevents rupture of the cocoon. The upper portion of the connection and remaining exposed steel pipe shall be coated as above.

Gaskets: Except as otherwise provided, all gaskets for pipe lines shall be one piece full faced gaskets from one-ply cloth inserted SBR rubber material. Gaskets for flanges 20 inches and smaller shall be from 1/16 inch thick material. Gaskets for flanges 24 inches and larger shall be from 1/8 inch thick material. Gasket material shall be J-M 109 as manufactured by Johns-Manville Corporation or an approved equal. Physical characteristics of the rubber compound shall meet ASTM D2000, Class 4AA805A13.

Flanges: Cast iron flanges shall conform to AWWA C-110 as to material, diameter, thickness, drilling, etc. Steel flanges shall be ring or hub type, and shall conform to AWWA C-207, Class D. All flanges shall be drilled and have flange diameters and bolt circles conforming to AWWA C-110, except bolt holes will be 1/8 inch larger than the bolts given for the various sizes. All bolts shall be as specified above and all flanges shall have a flat facing.

SUBSECTION 610.12 FIRE LINE SERVICE CONNECTIONS delete subsection in its entirety and replace with the following:

Fire line service connections shall be installed in accordance with standard details.

The fire line from the control valves at the main to the detector check valve shall be constructed of C900 PVC pipe. Any exposed pipe portion or at a proximity of 5' or smaller from the exterior face of the structural footing shall be of ductile iron.

SUBSECTION 610.13 METER SERVICE CONNECTIONS delete subsection (A) in its entirety and replace with the following:

(A) Schedule 40 PVC pipe shall be used to connect or extend service pipes.

SECTION 611 – WATER, SEWER AND STORM DRAIN TESTING

SUBSECTION 611.1 HYDROSTATIC TESTING (A) Pressure Testing delete subsection in its entirety and replace with the following:

- (A) **Pressure Testing:** Unless otherwise noted in the contract documents, the minimum prescribed test pressure shall be at least 150 psi for distribution lines and 200 psi for fire lines, not to exceed 5 psi over the minimum prescribed test pressure, as measured at the lowest end of the section under test. The duration of each pressure test shall be at least 2 hours, during which time the test section shall not drop below the minimum prescribed test pressure. If the pressure in the pipe test section has not stabilized by the end of the testing period, a hydrostatic retest will be required.

Each section of a new line between sectionalizing valves or between the last sectionalizing valve and the end of the project shall be tested separately as required in AWWA C-600, and/or as modified in these specifications, except that any such section less than 500 feet in length may be tested with the adjacent section, if both sections of line have the same pipe class rating. No section greater than 1/2 mile in total pipe length shall be tested without special written permission of the Engineer.

SUBSECTION 611.4 POST INSTALLATION INSPECTION OF NEW MAINLINE STORM DRAINS (A) Video Inspection: delete subsection (A) in its entirety

[611-1](#)

SECTION 615 – SANITARY SEWER LINE CONSTRUCTION

SUBSECTION 615.4 SEPARATION delete last paragraph:

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[615-1](#)

SECTION 618 – STORM DRAIN CONSTRUCTION

SUBSECTION 618.1 DESCRIPTION delete subsection in its entirety and replace with the following:

This section covers pipe line construction used for the conveyance of irrigation water and storm drainage in streets, easements, and alley right of ways, under low hydrostatic heads.

Installation of pipe in laterals of other agencies shall conform to the specifications and permit of the respective agency.

Installation of pipe in State Highways shall conform to the specifications and permit of the Arizona Department of Transportation. Installation of pipe under railways shall conform to the specifications and permit of the respective railway agency.

SECTION 625 – MANHOLE CONSTRUCTION AND DROP SEWER CONNECTIONS

SUBSECTION 625.2 MATERIALS delete subsection in its entirety and replace with the following:

Unless otherwise shown on the plans or specified in the special provisions, materials to be used shall conform with the following:

Concrete for cast in place sanitary sewer manhole bases shall be Class A, for drop sewer connection shall be Class C, per Section [725](#).

Pipe used in sanitary sewer manholes or drop sewer connections shall comply with pipe requirements of Section [615](#).

Manhole frame and cover per Section [787](#) and cast in accordance with standard details.

Manhole steps shall not be used.

SUBSECTION 625.3.1 MANHOLES delete subsection in its entirety and replace with the following:

Manholes shall be constructed of T-Lock lined precast concrete sections, polymer or cast in place concrete. The invert channels shall be smooth and semi-circular in shape, conforming to the inside of the adjacent sewer sections. Changes in direction of flow shall be made with a smooth curve, having a consistent radius as large as the manhole will permit with no angle points. Changes in size and grade of the channels shall be made gradually, evenly, and uniformly throughout the manhole base.

Invert channels may be formed of concrete having a smooth mortared surface, may be half tile laid in concrete, or may be constructed by laying full section of sewer pipe through the manhole and breaking out the top half after the surrounding concrete has hardened. The floor of the manhole outside the channels shall be smoothed and shall slope towards the channels.

The excavation shall be in such a manner, access is maintained around the manhole base before, during, and after placement of the manhole.

For cast-in-place manhole bases, a foundation of Class A concrete shall be constructed in accordance with the standard details and Section [505](#).

All machined surfaces on the frame and cover shall be such that the cover will lie flat in any position in the frame and have a uniform bearing through its entire circumference. Any frame and cover which creates any noise when passed over by automobiles shall be replaced. Frames shall be set firmly in a bed of mortar true to line and grade, all as shown on the plans and as called for in these specifications.

Backfilling shall be done in accordance with the requirements for trench backfilling as stated in Section [601](#).

[625-1](#)

SECTION 630 – TAPPING SLEEVES, VALVES AND VALVE BOXES ON WATER LINES

SUBSECTION 630.3.1 GENERAL (D) delete subsection in its entirety and replace with the following:

(D) Valves 24 inches and larger:

Valves shall be resilient wedge

Valves shall be for operation in the horizontal position and equipped with bronze tracks, rollers and scrapers. Valves shall have bevel gears. The gears and stuffing box shall be enclosed in a watertight iron case, for operation in a buried location. Bolts, nuts, studs, etc., used with the gear case shall conform to the requirements for Bonnet Bolting in AWWA C-500. The case shall be filled with grease to the factory.

By-pass valves shall be furnished and installed on each valve unless otherwise indicated on the approved plans. See Table [630-1](#) for by-pass valve sizes.

SUBSECTION 630.5 BUTTERFLY VALVES delete this subsection in its entirety

[630-1](#)

SECTION 631 – WATER TAPS AND METER SERVICE CONNECTIONS

Shall conform to the City of Yuma Construction Standards

SUBSECTION 631.1 DESCRIPTION delete subsection in its entirety and replace with the following:

This specification covers work by Contractors installing water services in new subdivisions by Permit and in projects under Contract. All the materials used shall comply with applicable standard specifications and the work performed in accordance with these specifications and standard details. The service connections shall be complete and all material shall be furnished by the Contractor except for the water meter.

All water service connections shall be constructed of Schedule 40 PVC pipe.

All new subdivision water lines shall be staked for line and grade at 100 foot intervals by the Developer's Engineer prior to construction. All meter locations shall be staked by setting two stakes for line and marking one of the stakes for grade.

SUBSECTION 631.2 MATERIALS delete this subsection in its entirety and replace with the following:

All 1" and 2" service connections shall be constructed of Schedule 40 PVC.

SUBSECTION 631.3.4 POLYETHYLENE PIPE delete this subsection in its entirety

SUBSECTION 631.3.5 SERVICE TAPS delete subsection in its entirety and replace with the following:

One inch and 3/4 inch service taps to new meter mains may be made with a saddle, or tapped coupling, connections 4" and larger require service saddle in accordance with the following provisions:

The Developer may use heavy tapped couplings for meter service connections on all sizes of pipe including the 3 inch pipe in cul-de-sac streets. Bronze corporation stops must be installed in the tapped couplings prior to pressure testing or disinfection of the water main. Normally in subdivisions no saddles are required for 6 inch pipe and larger.

At the Contractor's option, saddles may be used on all 6 inch pipe and larger. All service connections on major and collector streets shall be made with saddles or heavy duty tapped couplings regardless of the water main size or service pipe size. All taps on pipe smaller than 6 inches must be made by either a saddle or heavy tapped coupling with bronze insert.

All wet taps must be made by the Mueller Type B-100 tapping machine or approved equal. A sharp tapping bit must be used in order to obtain clean sharp threads. In general, each tapping tool should be resharpened or discarded after making 6 taps. The minimum distance between taps, saddles, and tapped couplings shall be 3feet.

[631-1](#)

CONSTRUCTION SPECIFICATIONS

PART 700 - MATERIALS

Section Title	COY
701 Aggregate	N/A
702 Base Materials	N/A
703 Riprap	N/A
705 Portland Cement Treated Base	N/A
708 Asphalt Pavement Core Bonding Materials	N/A
710 Asphalt Concrete	710-1
711 Paving Asphalt	N/A
712 Liquid Asphalt	N/A
713 Emulsified Asphalts Materials	N/A
714 Microsurfacing Materials	N/A
715 Slurry Seal Materials	715-1
716 Cover Material	N/A
717 Asphalt-Rubber Asphalt Concrete	N/A
718 Preservative Seal for Asphalt Concrete	N/A
725 Portland Cement Concrete	725-1
726 Concrete Curing Materials	N/A
727 Steel Reinforcement	N/A
728 Controlled Low Strength Material	N/A
729 Expansion Joint Filler	N/A
735 Reinforced Concrete Pipe	N/A
736 Non-reinforced Concrete Pipe	N/A
738 High Density Polyethylene Pipe and Fittings for Storm Drain and Sanitary Sewer	738-1
739 Steel Reinforced Polyethylene Pipe & Fittings for Storm Drain, Irrigation & Sanitary Sewer	N/A
740 Polypropylene Pipe & Fittings for Storm Drain, Irrigation & Sanitary Sewer	N/A
741 Lining for Reinforced Concrete Sanitary Sewer Pipe	741-1
742 Precast Manhole	N/A
743 Vitrified Clay Pipe	743-1
744 ABS Truss Pipe and Fittings	N/A
745 PVC Sewer Pipe and Fittings	N/A
750 Iron Water Pipe and Fittings	750-1
752 Asbestos-Cement Water Pipe and Fittings	752-1
753 Galvanized Pipe and Fittings	753-1
754 Copper Pipe, Tubing and Fittings	754-1
755 Polyethylene Pipe for Water Distribution	N/A
756 Dry Barrel/Fire Hydrants	N/A
757 Sprinkler Irrigation System	N/A
758 Concrete Pressure Pipe - Steel Cylinder Type	N/A
759 Steel Pipe	N/A
760 Coating Corrugated Metal Pipe and Arches	N/A
761 Structural Plate Pipe, Arches, and Pipe Arches	N/A
770 Structural and Rivet Steel, Rivets, Bolts, Pins, and Anchor Bolts	N/A
771 Galvanizing	N/A

772	Chain Link Fence	N/A
775	Brick and Concrete Masonry Units (Blocks)	N/A
776	Masonry Mortar and Grout	N/A
778	Lumber	N/A
779	Wood Preservatives	N/A
787	Gray Iron Castings	N/A
790	Paint	N/A
792	Dust Palliative	N/A
795	Landscape Material	N/A
796	Geosynrhetics	N/A

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SECTION 710 – ASPHALT CONCRETE

SUBSECTION 710.3 MIX DESIGN REQUIREMENTS add the following:

An approved mix design can be included in the City approved product list for an additional year from the date the mix was formulated, sealed and signed upon receiving evidence that the type of bituminous material, the type of mineral admixture, and the source and methods of the producing mineral aggregate have not changed since the formulation of the previous mix design. The submittal shall include the above noted evidence and also provide test results for the aggregates and the mix, to include; gradations and specific gravity of the coarse and fine aggregates, maximum theoretical (Rice) density, Marshall Data and void calculations at the optimum oil content.

SUBSECTION 710.3.1 GENERAL delete first paragraph and item (7) in its entirety and replace with the following:

The mix design for asphalt concrete shall be prepared by a laboratory that is accredited through the AASHTO Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona. The date of the design shall not be older than one year of submittal, unless supportive documentation is provided and approved by the Engineer.

(7) The results of all testing, determinations, etc., such as: specific gravity and gradation of each component, water absorption, sand equivalent, loss on abrasion, fractured coarse aggregate particles, Tensile Strength Ratio (ASTM D4867) or Compressive Strength of Bituminous Mixtures (ASTM D 1074) and Effects of Water on Compressive Strength of Compacted Bituminous mixtures (ASTM D1075). Marshall stability and flow, asphalt absorption, percent air voids, voids in mineral aggregate, and bulk density. Historical abrasion values may be supplied on existing sources. The submittal should include a plot of the gradation on the Federal Highway Administration's 0.45 Power gradation Chart, plots of the compaction curves and the results of moisture sensitive testing.

SUBSECTION 710.3 MIX DESIGN REQUIREMENTS add the following to Table 710-3:

5a Min. Dry Strength of 250psi per ASTM D1075

5b Min. Retained Wet Strength of 70% of the dry strength.

SECTION 715 – SLURRY SEAL MATERIALS

SUBSECTION 715.2.2 MINERAL AGGREGATE add the following:

City of Yuma Sweeper Sand can be used as long as the material meets the gradation requirements listed in table 715-1. Contractor will be responsible to clean the sweeper sand of all debris.

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[715-1](#)

SECTION 725 – PORTLAND CEMENT CONCRETE

SUBSECTION 725.3 AGGREGATES delete first paragraph in its entirety and replace with the following:

Coarse and fine aggregate shall conform to the applicable requirements of ASTM C33. Coarse aggregate grading requirements shall conform to the appropriate rock size designation in the Grading Requirements for Coarse Aggregate, Table 3. Fine aggregate grading requirements shall conform to the Fine Aggregate Grading section.

SUBSECTION 725.6 MIX DESIGN PROPORTIONING add the following:

An approved mix design can be extended for an additional year from the date the mix was formulated, sealed and signed upon receiving supporting data from the approved laboratory, including but not limited to aggregate test results and concrete strength testing records not more than 24 months old. The mix design requires the signature of a P.E. and will be reviewed in accordance with ACI 318 Chapter 5.

SUBSECTION 725.8.2 CONCRETE CYLINDER TEST delete first paragraph in its entirety and replace with the following:

A cylinder strength test shall consist of three 6x12 cylinders or three 4x8 cylinders made from the same sample of concrete. One cylinder will be tested at 7 days and the average of two will be tested at 28 days.

SECTION 738 – HIGH DENSITY POLYETHYLENE PIPE AND FITTINGS FOR STORM DRAIN AND SANITARY SEWER

SUBSECTION 738.1 GENERAL delete first paragraph in its entirety and replace with the following:

This specification covers the requirements of profile-reinforced and corrugated (Type S or Type D) high density polyethylene (HDPE) pipe manufactured per ASTM F894, AASHTO M-252 or AASHTO M-294 for gravity flow, low pressure storm drain and sanitary sewer systems. When noted on the plans or in the special provisions, gravity flow, low pressure storm drains and sanitary sewers may be constructed using HDPE pipe. The HDPE pipe will be of the sizes 12 inch diameter through 120 inch diameter. For the purpose of this specification, low pressure is defined as the test pressures of 3.5 psi of air or 4 feet of water as specified in Section [615.11](#).

[738-1](#)

SECTION 741 – LINING FOR REINFORCED CONCRETE SANITARY SEWER PIPE delete
this section in its entirety

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[741-1](#)

SECTION 743 – VITRIFIED CLAY PIPE delete this section in its entirety

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[743-1](#)

SECTION 750 – IRON WATER PIPE AND FITTINGS delete this section in its entirety

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[750-1](#)

SECTION 752 – ASBESTOS-CEMENT WATER PIPE AND FITTINGS delete this section in its entirety

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[752-1](#)

SECTION 753 – GALVANIZED PIPE AND FITTINGS delete this section in its entirety

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[753-1](#)

SECTION 754 – COPPER PIPE, TUBING AND FITTINGS delete this section in its entirety

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[754-1](#)